

Please replace the paragraph beginning at line 1 on page 20 with the following rewritten paragraph:

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--the Xaa groups, identical or different, represent an amino acid which may or may not be natural (including D-amino acids), either aliphatic or aromatic, such as among glycine, alanine, valine, norleucine, isoleucine, leucine, cysteine, cysteine^{Acm}, penicillamine, methionine, serine, threonine, asparagine, glutamine, phenylalanine, histidine, tryptophan, tyrosine, proline, Amino butyric acid, carboxylic amino-1-cyclohexane acid, Amino isobutyric acid, carboxylic 2-aminotetraline, 4-bromophenylalanine, tert-Leucine, 4-chlorophenylalanine, β -cyclohexylalanine, 3,4-dichlorophenylalanine, 4-fluorophenylalanine, homoleucine, β -homoleucine, homophenylalanine, 4-methylphenylalanine, 1-naphthylalanine, 2-naphthylalanine, 4-nitrophenylalanine, 3-nitrotyrosine, norvaline, phenylglycine, 3-pyridylalanine, (2-Thienyl)-alanine.--

In the Claims: ✓

Please cancel claims 1-17 and add the following new claims:

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18. (New) An isolated peptide derived from an antibiotic peptide or an analogue thereof, wherein said isolated peptide is devoid of a disulphide bond and wherein said isolated peptide has the sequence: Arg-Arg-Leu-Ser-Tyr-Ser-Arg-Arg-Arg-Phe (SEQ ID NO:23).
 19. (New) The isolated peptide of claim 18, wherein the antibiotic peptide is a β -stranded antibiotic peptide.
 20. (New) A method for vectoring an active substance using a β -stranded antibiotic peptide or an analog thereof, wherein said peptide or analog thereof is devoid of disulphide bonds, said disulphide bonds being removed, replaced by another amino acid or wherein one or more cysteines in said peptide or analog thereof is blocked at the SH group level, said method comprising the steps of:

- (a) coupling said active substance to said peptide; and
- (b) conveying said active substance coupled with said peptide to a target, said target being selected from the group consisting of a particular cell compartment, a particular cell type or a particular organ.

21. (New) The method according to claim 20, wherein said β -stranded antibiotic peptide is selected from the group consisting of:

Baa Xaa Xaa Baa Xaa Xaa Xaa Baa Baa Baa Xaa Xaa Xaa Xaa Baa (I)

(SEQ ID NO:11); and

Baa Baa Xaa Xaa Xaa Baa Xaa Xaa Baa Xaa Xaa Baa Baa Xaa Baa (II)

(SEQ ID NO:12),

wherein Baa independently represents an amino acid residue having a base group as its side chain, and wherein Xaa independently represents an aliphatic or aromatic amino acid residue.

22. (New) The method according to claim 20, wherein said β -stranded antibiotic peptide has one of the following formulas:

Baa Xaa Xaa Baa Xaa Xaa Xaa Baa Baa Baa Xaa Xaa Xaa Xaa Xaa Baa (I)

(SEQ ID NO : 11)

Baa Baa Xaa Xaa Xaa Baa Xaa Xaa Baa Xaa Xaa Xaa Baa Baa Xaa Baa (II)

(SEQ ID NO : 12)

wherein :

the Baa groups are selected from the group consisting of arginine, lysine, diaminoacetic acid, diaminobutyric acid, diaminopropionic acid, ornithine, and

the Xaa groups are selected from the group consisting of among glycine, alanine, valine, norleucine, isoleucine, leucine, cysteine, cysteine^{Acm}, penicillamine, methionine, serine, threonine, asparagine, glutamine, phenylalanine, histidine, tryptophan, tyrosine, proline, Amino butyric acid, carboxylic amino-1-cyclohexane acid, Amino isobutyric acid, carboxylic 2-aminotetraline, 4-bromophenylalanine, tert-

Leucine, 4-chlorophenylalanine, β -cyclohexylalanine, 3,4-dichlorophenylalanine, 4-fluorophenylalanine, homoleucine, β -homoleucine, homophenylalanine, 4-methylphenylalanine, 1-naphthylalanine, 2-naphthylalanine, 4-nitrophenylalanine, 3-nitrotyrosine, norvaline, phenylglycine, 3-pyridylalanine, and β -(2-Thienyl)-alanine.

23. (New) The method according to claim 20, wherein said β -stranded antibiotic peptide has one of the following formulas :

Arg Xaa Xaa Arg Xaa Uaa Xaa Uaa Arg Arg Arg Xaa Uaa Xaa Uaa Xaa Xaa Arg -
NH₂ (V) (SEQ ID NO : 13)

Arg Arg Xaa Uaa Xaa Arg Xaa Uaa Xaa Arg Xaa Xaa Uaa Xaa Arg Arg Uaa Arg -
NH₂ (VI) (SEQ ID NO : 14)

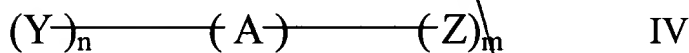
wherein:

Uaa represents serine or threonine, and

the Xaa groups, independently, represent an amino acid which may or may not be natural, including D-amino acids, either aliphatic or aromatic, such as among glycine, alanine, valine, norleucine, isoleucine, leucine, cysteine, cysteine^{Acm}, penicillamine, methionine, serine, threonine, asparagine, glutamine, phenylalanine, histidine, tryptophan, tyrosine, proline, Amino butyric acid, carboxylic amino-1-cyclohexane acid, Amino isobutyric acid, carboxylic 2-aminotetraline, 4-bromophenylalanine, tert-Leucine, 4-chlorophenylalanine, β -cyclohexylalanine, 3,4-dichlorophenylalanine, 4-fluorophenylalanine, homoleucine, β -homoleucine, homophenylalanine, 4-methylphenylalanine, 1-naphthylalanine, 2-naphthylalanine, 4-nitrophenylalanine, 3-nitrotyrosine, norvaline, phenylglycine, 3-pyridylalanine, and β -(2-Thienyl)-alanine.

24. (New) The method of vectoring an active substance using a peptide according to claim 18, the method comprising the steps of:
- (a) coupling said active substance to said peptide; and
 - (b) conveying said active substance coupled with said peptide to a target chosen among a particular cell compartment, a particular cell type or a particular organ.

25. (New) A compound of the formula (IV) :



wherein:

A represents a linear peptide derived from a β -stranded antibiotic or an analog thereof, wherein said linear peptide is devoid of disulphide bonds, said disulphide bonds being removed, replaced by another amino acid or wherein one or more cysteines in said peptide or analog thereof is blocked at the SH group level, and wherein

Z represents an active substance;

Y represents a signal agent;

n is 0 or 1; and

m is 1 to 10.

26. (New) The compound according to claim 24, wherein said linear peptide (A) comprises:

Baa Xaa Xaa Baa Xaa Xaa Xaa Xaa Baa Baa Baa Xaa Xaa Xaa Xaa Xaa Baa (I)
(SEQ ID NO : 11), or

Baa Baa Xaa Xaa Xaa Baa Xaa Xaa Xaa Baa Xaa Xaa Xaa Baa Baa Xaa Baa (II)
(SEQ ID NO : 12)

wherein:

the Baa groups, independently, represent an amino acid residue whose side chain carries a base group; and

the Xaa groups, independently, represent an aliphatic or aromatic amino acid residue.

27. (New) The compound according to claim 25, wherein said linear peptide (A) meets one of the following formulas:

Baa Xaa Xaa Baa Xaa Xaa Xaa Xaa Baa Baa Baa Xaa Xaa Xaa Xaa Xaa Baa (I)
(SEQ ID NO : 11), or

Baa Baa Xaa Xaa Xaa Baa Xaa Xaa Xaa Baa Xaa Xaa Xaa Baa Baa Xaa Baa (II)
(SEQ ID NO : 12)

wherein:

the Baa groups are selected from the group consisting of arginine, lysine, diaminoacetic acid, diaminobutyric acid, diaminopropionic acid, ornithine; and

the Xaa groups are selected from the group consisting of glycine, alanine, valine, norleucine, isoleucine, leucine, cysteine, cysteine^{Acm}, penicillamine, methionine, serine, threonine, asparagine, glutamine, phenylalanine, histidine, tryptophan, tyrosine, proline, Amino butyric acid, carboxylic amino-1-cyclohexane acid, Amino isobutyric acid, carboxylic 2-aminotetraline, 4-bromophenylalanine, tert-Leucine, 4-chlorophenylalanine, β -cyclohexylalanine, 3,4-dichlorophenylalanine, 4-fluorophenylalanine, homoleucine, β -homoleucine, homophenylalanine, 4-methylphenylalanine, 1-naphthylalanine, 2-naphthylalanine, 4-nitrophenylalanine, 3-nitrotyrosine, norvaline, phenylglycine, 3-pyridylalanine, and β -(2-Thienyl)-alanine.

28. (New) The compound according to claim 25, wherein said linear peptide (A) comprises one of the following formulas:

Arg Xaa Xaa Arg Xaa Uaa Xaa Uaa Arg Arg Arg Xaa Uaa Xaa Uaa Xaa Xaa Arg -NH₂ (V)
(SEQ ID NO : 13), or

Arg Arg Xaa Uaa Xaa Arg Xaa Uaa Xaa Arg Xaa Xaa Uaa Xaa Arg Arg Uaa Arg -NH₂ (VI)
(SEQ ID NO : 14)

wherein:

Uaa is serine or threonine; and

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the Xaa groups, independently, represent an amino acid which may or may not be natural, including D-amino acids, either aliphatic or aromatic, such as among glycine, alanine, valine, norleucine, isoleucine, leucine, cysteine, cysteine^{Ac^m}, penicillamine, methionine, serine, threonine, asparagine, glutamine, phenylalanine, histidine, tryptophan, tyrosine, proline, Amino butyric acid, carboxylic amino-1-cyclohexane acid, Amino isobutyric acid, carboxylic 2-aminotetraline, 4-bromophenylalanine, tert-Leucine, 4-chlorophenylalanine, β -cyclohexylalanine, 3,4-dichlorophenylalanine, 4-fluorophenylalanine, homoleucine, β -homoleucine, homophenylalanine, 4-methylphenylalanine, 1-naphthylalanine, 2-naphthylalanine, 4-nitrophenylalanine, 3-nitrotyrosine, norvaline, phenylglycine, 3-pyridylalanine, and β -(2-Thienyl)-alanine.

29. (New) A compound of formula (IV) comprising a peptide according to claim 18.
30. (New) The compound according to claim 25, wherein at least one of the active substances (Z) is attached by a covalent bond to either the N-terminal or C-terminal ends or at the primary amino groups carried by the side chains of the lysines of linear peptide (A).
31. (New) A compound according to claims 26 or 27, wherein at least one of the active substances (Z) is attached by a covalent bond either to the N-terminal or C-terminal ends or at the primary amino groups carried by the side chains of the lysines, of linear peptide (A).
32. (New) A compound according to any claim 25, wherein at least one signal agent (Y) is attached via a covalent bond to the N-terminal end of linear peptide (A).

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B2/ 33. (New) A pharmaceutical composition comprising as active ingredient at least one compound of formula (IV) according to claim 24.

34. (New) A diagnostic agent comprising at least one compound of formula (IV) according to claim 25.
